# Accessibility Metadata, T-157 Days – webinar transcript

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<https://daisy.org/news-events/articles/accessibility-metadata-t-157-w/>

Welcome, everyone. My name is Richard Orme, and I'm delighted to have you join us today for another webinar hosted by the Daisy consortium. As we count down the days until the European Accessibility Act comes into force. We're bringing you this series of webinars to help you prepare. And this week we explore the latest developments related to metadata. Now, metadata provides the framework that enables the publishing industry to function and accessibility metadata for digital publications is the key to unlock the publishing world for people with print disabilities. Because of its critical role, metadata is identified as a requirement under the European Accessibility Act, so care needs to be taken to implement it by all parties involved in the industry. Today, we're going to hear from industry experts to bring you the latest guidance and best practices in accessibility, metadata. Our presenters will be referencing a very new document that's in the final stages of publication, but you can access it daisy.org/a11y-meta2 So that's daisy.org/a11y-meta2 Well I'm sure you'll have lots of questions. So do use the Q&A button in zoom to submit them. And we'll cover as many questions as possible towards the end of the webinar.

Hello. My name is George Kershner, chief innovation officer with the Daisy consortium and senior officer of Global Literacy with Benetech. What we're talking about is the accessibility metadata guide for digital publications 2.0. This replaces version one that was published in September of 2021. It's a major improvement to that specification, which was implemented broadly by distributors of digital content companies. Use that guideline in order to display to end users the accessibility of the publications they were about to purchase or assign in an educational setting. We published a, draft of these guidelines in the summer, and an update draft in November. In many companies, publishers, organizations provided feedback that help us address their needs where they want to, either as a publisher, make sure they're providing accessibility metadata that is appropriate and that will be interpreted and presented correctly, and or a distributor that is looking to present the information in their catalogs. So this guidelines is geared toward both publishers and distributors to make sure that the accessibility metadata that is being shown to end users accurately reflect reflects the publication that they're purchasing. One of the things that we talk about in the general information is that these metadata statements that are being displayed to end users are really claims from the publisher. It's coming directly from the metadata provided by the publisher, the distributor or the library. Providing this information on a website is not inferring any any information. They're just communicating it directly from the metadata. In here there's key accessibility information. And we grouped these into different categories. And some of these are really essential and should be displayed all the time. The ways of reading is an area a category, that groups three pieces of information the non-visual, the visual adjustments. And also if there is prerecorded audio and people read with their eyes, ears and fingers. And this is the section that describes how people read, the information about visual adjustments is absolutely essential and should be displayed. People want to know if they're going to be able to change the font and size and colors. And another area is around non-visual reading. People who are blind and use a screen reader want to know if they're going to be able to consume all of the information. So when there's images provided, we need to know if there is an alt alternative text being provided and if those images are described. Another piece of essential information is around the conformance. What does this conform to? Is it, conform to WCAG 2.1 or 2.2 at the A or double AA level, or what conformance standards does it apply to in each one of the sections there is an overview of what it's about. So for example, navigation has an overview that explains that it's talking about the table of contents. Or go to page and that overview is provided. Then there's a series of statements, display statements that are provided as compact and descriptive statements. And we'll show you a screenshot of this. So for example, a compact statement might be that it has a table of contents. And the descriptive would be that it has a table of contents to all sections of the publication. And the other main categories are rich content, which is many times information provided in images that have extended descriptions in this section we talk about MathML and latke and chemistry, whether videos have, captioning and other rich information. We have a section on hazards that is, important to display if there is any. Accessibility summary legal consideration and additional accessibility information, which really is a category to identify anything that wasn't covered in the other ones. Most of the time these are not too common. And finally, in this publication, we have a section on discovering, titles, which is a discussion of, search and filtering on the accessibility metadata fields and localization. We are having, a list of all the possible statements that are being made in this publication. You'll see many of them in the key information area, but not all of them. They all will be in the techniques and in the, localization. We're producing a Json file that lists all the compact strings and all the descriptive strings, and it's up to the implementer of these guidelines to decide whether they want to show one or the other, or if they would show the compact and have a way of expanding to show the descriptive strings. And we do expect this to be translated into 37 languages. We hope to have this Json file finalized before the end of this month in January, so people can start to implementing. It will continue to fine tune the presentation of this publication, do another draft very soon, and finalize it certainly before January 28th of this year, we finally will have a section on implementations where we will show real world examples from companies that are are presenting the accessibility metadata. In this way, people who are implementing content get an idea of what other people have done. So that's a overall summary of the guidelines. There's two sections that are linked techniques for ONIX and techniques for EPUB schema, which provides the code that people can implement to actually extract these strings and present them to end users. And we're going to have Gregorio talking exactly about that right now. Thank you.

Hello, everyone. I'm delighted to be here with you today. I'm Gregorio Pellegrino, chief accessibility officer at Fondazione LIA and coeditor of the Accessibility Metadata Display Guide for Digital Publications 2.0. We are non-for-profit organization based in Italy, working globally with various stakeholders across the digital publishing supply chain to make the entire ecosystem more accessible. And within this ecosystem, metadata and specifically accessibility metadata plays a vital role. It's not just about best practices, but it's also a legal requirement. Since we are based in Europe, we have the European Accessibility Act, or EAA, that establish specific requirements for accessibility, metadata for services in general. Providers must offer clear information about how their service functions and their accessibility features. And within the European Accessibility Act context, e-books are considered as services. But for e-books specifically, the EAA requires that digital publications must be discoverable through metadata. This ensures users can find the accessible content that meets their needs. Let's look at how metadata flows through the digital publication ecosystem. This diagram categorized two types of metadata accessibility metadata that we have. The first one are embedded within the publication document. The publication file, and these are EPUB and PDF metadata. The second one are external metadata for external records that are in ONIX or Mark. ONIX is more in the trade supply chain, while Marc is more in the library world. For each metadata stunner, we have specification for accessibility, metadata. For EPUB, we have the EPUB accessibility 1.1 that defines the EPUB accessibility metadata. For PDFs, we use standards like PDF, UA-1, and PDF UA-2 ONIX as specific fields for the accessibility information and a specific code list 196 for expressing the different accessibility features. Mark. As is UN record for accessibility fields unfurls. Knowing how the metadata is encoded and knowing the guidelines that were presented by George, we then have some techniques that allows developers to take the information from the metadata record, from the metadata standard, and display that information in a user friendly way to the end user. The goal is to be able to display to the end user the same information, regardless by the metadata standard that is used. Using standardized accessibility metadata offers several key advantages. These standards are obvious and are the result from a global collaboration across the publishing industry. Another benefit is that we have implementation guidelines for the different accessibility metadata standards, so that the implementation side, the implementation path is efficient, cost effective, and doesn't require an extensive analysis. So to help developers in implementing these standards, these guidelines, we provided the tied techniques for extracting and displaying accessibility metadata. Currently, we have comprehensive techniques available for EPUB Accessibility metadata and ONIX Accessibility metadata. These techniques are based on the guidelines that were presented by George and ensure consistent implementation across platforms. For each accessibility information. Key accessibility information are the groups that were presented. We have three sections in the techniques. First one is understanding the variables. Second one is how to set the variables. How to extract the information from the metadata present in the file or index and wrapper. And this is based on XPath. And the third one is instruction for algorithms that are not anomalies in pseudo codes that apps developers to understand how to leverage on the information present in the records and display strings to the end users. The output is the string that should be shown to the end user, and the string is present using an ID so that the localization is based on the IDs of the string. So for each string, we have a unique identifier, and based on that unique identifier, we can then localize the string in different languages. But let me show you a practical example using the the navigation key accessibility information. We define some specific variables like table of contents, navigation index, navigation structure, navigation and here you have also the explanation of what they mean. Then for each variable we have clear implementation instructions for extracting that information from the metadata records. In this example is an ONIX record, and you have a path for getting that information out of the ONIX record. Then we have app pseudocode algorithm that allows the developer to take the variables, make some calculation, and define what should be displayed to the end user. And as you can see, for each variable, we have the id and that id is the unique identifier for the localization. Finally, I want to show you something that is brand new is something we are working on in Fondazione. And here is a mock up. At the moment we are implementing it and it's a real world implementation of this guidelines and the techniques in the LIA website. As you can see, we have all this disability information in Italian because it's for the Italian audience, where you can see the certification navigation options. Definitely the most. This makes it easy for users to understand exactly what accessibility features are available for our specific people. Thank you.

Thank you, George and Gregorio, for that insight into these new metadata guidelines. If you have questions for George or Gregorio, please use the Q&A button and we'll get to those shortly. But first, as part of this countdown to EAA series, we've been hearing from people across the world about the impact of the legislation, some of the challenges in implementation, and the recommendations for action. This time, we're hearing from Marian and Laura.

Hi. I'm Marian Oosting. I am a communication advisor at, at Dedicon in the Netherlands. And, I've been, focused on the European accessibility act quite a few years. also, being, active in the apace project. And, just to give an idea, Dedicon is a specialized library in the Netherlands for people with a print impairment. And we are experts in producing accessible, formats for books, educational materials, newspapers and magazines. Hi there. my name is Laura Brady. I am an accessibility busybody. I'm also, a freelance consultant for inbound to Canada. I also work with the International Publishers Association, chairing their accessibility subcommittee, and I'm on the board of the ABC in addition to, other things, I teach at Toronto Metropolitan University and Simon Fraser University and the publishing programs and teaching on accessibility, specifically. Well, what I really hope, and I guess that we are all hoping for is that there will be, a broader supply of accessible ebooks for everyone. whether you're having a print impairment or not. for the Netherlands specifically, I'm really hoping that, the, the supervising body in the Netherlands will state which, standard they are going to use. to, to check the accessibility of e-books because publishers right now are still kind of in the dark about this. and of course, we kind of know which standards there are and, and what they can use, but it's not clearly stated yet by the supervising body. And we're hoping that they will do that quite soon. And also for us, very important also for Dedicon very important is that the Dutch government is going to make concrete regulations, when it comes to electronic learning platforms. because right now these are not included. and not, you know, not mandatory, accessible. like, ebooks. and we want those included in regulation as well. The EAA has the potential to be a real sea change in so many areas of publishing, digital and otherwise. Frankly, the threat of the unknown when it comes to enforcement has a lot of publishers taking notice, which is a very good thing. But one of my keenest hopes is that the supply chain is revolutionized, such that it's easier for print disabled readers to find content that meets their needs. And that's where the importance of writing good accessibility metadata comes in. And absence of this data is a final offense under the EAA, which is certainly motivating for publishers. So figuring out how to write ONIX schema and conformance metadata is a real journey for folks who aren't used to that. and thanks to the excellent work from the Accessibility Task Force at the W3C, we have really good documents to guide both publishers and vendors for the display of these critical data points. So my hopes for the EAA is that it will be easier for print disabled folks to find the books they need, because they will be richer and more robust. Metadata describing the accessibility of those documents. So what we are going to focus on in the next couple of months towards the 28th of June is, first of all, keep on training. The Dutch publishers in their transition towards, accessible publishing. and doing that as well in the, a pace project and, and we're also very much focusing on the Dutch government, to get them to apply the accessibility guidelines from the Accessibility Act into the education as well. and have besides e-books, also electronic, learning platforms accessible for students with a print impairment. So what do I see myself focusing on over the next six months in the lead up to the EAA, or encouraging others to focus on? I see a lot of education happening at the moment. Publishers, vendors and support organizations are almost unanimously focused on webinars, workshops, and even bespoke training sessions. In my work with the event Canada, we produced, a fairly large hundred page report on accessibility metadata to encourage publishers to level up their game writing. Accessibility metadata might seem like no big deal, but it's complex and it's really important to get it right. I've seen unfortunate situations where developers just reuse the same data over and over again, and I even once saw a children's picture books described as having MathML. Trust me, there was no complex math in that picture book. so what am I focused on? Despite a lot of good work around metadata, I think there's still room for good plain language explainers and hand-holding. to be honest. And the metadata in most publishers back lists needs energy and attention. So, two, three, four years ago and ten years ago, we weren't writing good accessibility metadata for those documents. So some publishers may already have fixed up their back lists or started working on that. But, frankly, the accessibility metadata around those backlist remediation projects, needs energy and attention. and that's going to be a challenge over the next six months or so. And then over the next period of time, as the, requiring the accessibility of the backlist sort of comes into force. So that's, a big area of focus for sure.

Wonderful stuff. Well, thank you, Marian and Laura, for those perspectives. Next we're going to hear from Matt Garrish from Daisy, who will give us an early look at an open source tool that provides a helpful means of previewing the accessibility metadata. Over to you, Matt. Thanks, Richard. You know, I'm, going to demo hopefully here, tool that we've been working on. as part of the work that Gregorio and the George were describing. this is started off basically as a means of, just trying to follow what the tech the techniques are producing. So, you know, it's helpful. It's easy to kind of come up with the, the general idea of what we want to get displayed, but actually getting those statements tested and proven and showing that they work and they produce the results that we wanted. you know, it actually takes an implementation to do that. but at the same time, this is sort of grown and we're looking it's it's a handy way for anyone. to be able to, to find out what their metadata will produce when it gets displayed, you know, in a vendors site. So basically what I've done, I've just copy an ONIX record and again there's a text field in this viewer. I just paste the ONIX record in full into the the text field, click my preview button and up come the metadata statements that result from the, record that I pasted in. And so again, these are based on the techniques and the guidelines. We have the Ways of Reading section. It gives you information about the display modified ability, whether it can be read aloud or dynamic braille can be generated from it. there's a conformance section, navigation section, etc.. you know, this is all information that's being pulled from this metadata record. it's just as easy, to go and so in this case, this year, I got a heap of three record here as well. This is the EPUB three package document. I can just take it drop it in as well. It's able to process these same idea like preview button. And I've my list of statements again for this new book. So I've got again all the ways of reading the conformance, all the the different categories that are spelled out in the guidelines. And all of these statements are based on the the coding that Gregorio mentioned this in the technique document. So it's it's basically a handy way of, of just being able to to, you know, visualize the, the metadata that's going to be produced from a book or I mean, it's also, you know, if you're looking to implement the, the techniques or produce a viewer or the statements, you know, this, this metadata will be available in GitHub, as a means of going in and, and sort of getting your bearings on it and seeing whether it matches, you know, your own implementations. There's, there's also, you know, this is sort of the part we've gotten the metadata here. It's, you know, I know there's always the question, how do you produce it? there's, you know, resources available, the smart tool that, we've produced, which is a complement to the ace evaluator, it's for doing the manual evaluations. It has, tabs in it as well. I can go. I'm just switching over screens here. This is jumping straight into the smart tool. you have a discovery tab. It just provides an easier means of, selecting and producing the metadata that you would need for your publication. So I don't really want to get too deep into this, but you can go through, tick off all the relevant fields, click generate, and you can get, you know, the EPUB metadata. There's also a distribution one which is same idea, but this is the ONIX metadata. So you could go through, you know, produce all the relevant fields you need. And quickly generate. And it would produce the ONIX metadata. And this is helped as well. Like the smart tool does some, intelligent things based on the ace, what it's able to extract. So it'll help you produce your metadata. And of course, our final piece here is our accessible publishing knowledge base, where we have whole sections on Schema.org and ONIX as well for producing this. So that's that's kind of the quick quick nutshell is, is, you know, we have this tool. We're we're still kind of early on it just going back to the, the viewer itself. there there'll be improvements coming as we finalize the document. So right now it's it's only producing the contact statements. we'll hopefully also be able to get the descriptive ones in and translations was mentioned, by Gregorio. You know, so hopefully we'll be able to provide, additional languages to so that you're not just getting the English output. So that's, that's kind of the, the, the state of things right now.

Ok great. so you've given us a preview there of the new tool that hopefully people will find useful for previewing the accessibility metadata, and also a neat way of being able to generate that metadata too. I know we'll be diving into that in a future webinar. Well, our presenters have covered a lot of ground. Will now move into the Q&A section of the webinar. So if you have questions for George Gregorio or Matt, you can use the Q&A button in zoom to submit those. I see we've got several all lined up and we'll cover as many questions as we can before the end of our time. First question is coming to you, Jorge. So you mentioned that the guidelines are in draft, but scheduled for publication soon. So just checking has the window for feedback now closed. We would love to get any kind of feedback that people have over the last two months. We've got a huge amount of feedback and we welcome more. As that feedback comes in, we'll try to include it in in the draft and even after we have a published version, we will keep that feedback, available for a future revision. We expect this to be a living, set of guidelines. of course, we're very interested in making sure that, we have a good, stable version in the next week or two so that people can implement these guidelines in their websites that need to go live in, before June 28th. so we expect a another working draft to come out shortly and then look on, the official release. But this next draft, I think, will be in a stable state that everybody could use who are going to implement. Thank you. George. the next is not a question. It's a comment from Cora Sica. Just saying them smart tool is really useful. So thank you for showing that, Matt. Gregorio, next question is for you. So we see in the techniques what looks like programing code is this code usable straight away by a web developer. How does that work. So in the techniques we have two kind of codes. One the first one is the experts. Experts is a standardized way to extract the information from example. I know it's a little bit technical, but the example is the standard behind both EPUB Accessibility Metadata and ONIX. So taking out and just copying and pasting the XPath can help developers to implement the techniques while the instructions part. So the algorithmic part is more so the code pseudo code is not something that you can use just just as it is. those instructions are really, really simple. And can be used in different programing languages like PHP, Python, JavaScript, whatever. And the implementation should be quite simple. I don't know, matter since you, that you have done the first real world implementation. How how much was it? Was it difficult to implement it? You know, it's not that hard, to be honest. It's, you know, as you said, the pseudo code is actually very similar to code that you're going to be implementing anyway in a lot of if else statements about what to display. So it's really just, you know, processing the, the Onnx or the EPUB record that you have and then applying the XPath, which for a lot of programing tools, they'll have XML tools that can do this for you, or you can just convert it into a data structure in your programing language. That's that's, you know, relatively easy to work with. So yeah, in my case, no, I would say that the actual logic was not that that hard. It's just we've been working on, you know, improving the strings and doing other stuff. But that's, you know, once that's stabilized, I think it will be generally pretty easy for people to, to implement these techniques. And I'm going to add that the logic in the order of these, if then statements, this pseudocode was worked out with, you know, people who really know the, accessibility metadata codes. It would be, I think, pretty difficult for a web developer who's not entrenched in this world, to figure all this out, having this available to them and having expert review, I think, goes a long way to getting a consistent presentation of accessibility metadata from, from all the sources out there. So I'm really hoping that, developers will take advantage of, this freely available pseudocode. Thank you all for that answer. The next question is coming to you, Matt. Christian, says that, you showed two different types of metadata schema, or EPUB, the EPF, metadata that goes in the OPF, and also ONIX, can maybe two types of metadata be included in the same EPUB OPF file. That's the question from Christian to Matt. Yeah. That's the ONIX records are external to the EPUB. So it's it's two separate metadata realms. Basically you're going to be providing accessibility metadata in some cases through the ONIX record to the vendor. And in cases where that's not it's also required as part of the accessibility specification to have the accessibility metadata within that metadata do is it's translatable, like Gregorio and and others, I think, have done work on creating, mapping tables. So it's not complicated to get from one to the other. It's it's relatively straightforward, but it is a case where there, there are two separate ways of expressing information, two separate metadata records. So you do need to produce the metadata for each. two separate ways. And Gregorio, they, they serve different purposes. Isn't that right? Yeah. So, for sure, let's say that the ONIX record normally is available far before the publication is available. So it's for pre-ordering pre-sale and issued, for the accessibility description as well in, in the standard. And that is normally managed by distributors, and aggregators. So you should speak to your distributor or aggregator about your unexpected data. Why the accessibility data are inside the file and they, distributed within the file are embedded. And so they go through the world supply chain to the reading system. So yeah, actually the the purpose of the two metadata is different, but the information you can express is the same. So when a distributor receives an EPUB, they can crack it open and grab that accessibility metadata. But in some places like libraries, they never have the actual EPUB available to them locally. It's use it's accessed through a service and but they can take the ONIX accessibility metadata in order to, create the, duplicate the accessibility information locally. Thanks, George. And the next question is coming your way. so unlike the metadata code that goes into the EPUB, that's for the reading systems and the distribution systems, the display of the accessibility metadata, of course, is for, human beings. we speak lots of languages across Europe and across the world. And you mentioned localization. Can you say a little bit more about how localization of those messages, the important information for maybe librarians, for, for teachers and for end users, how that will be translated for languages other than English. Okay. So in the code that Gregorio displayed, you saw that there was an I.D. associated, which with each string that's presented to the to the end user, those IDs have been our our identical between the schema, and the ONIX. And in the display guide, we have the same IDs. So there is an ID associated with each compact string. And that is stored in a Json file in the Json file will also be a companion descriptive string. So we have the compact and the descriptive both in the Json file. All the possible strings for the various metadata will be contained in that Json file. The official version. The canonical version of that Json file we hope to publish in the next few days week or so. and at that point, the US English strings could be translated into other languages, and another Json file would be produced for each one of those languages. So if you want to display in Italian, you would use the Italian Json file. If you wanted to German, you would use the German Json file or the display of that metadata. Gregorio, did I get that right? Yeah, right. So we identified more than 60, strings. So unique strings for each string we have the identifier and we have two versions, the compact and the descriptive one. And this set of strings with that this is going to produce the canonical Json and translating the canonical Json. Then for people who are implementing the guidelines in website with several languages, different countries, the, the all the guidelines are based on IDs. So just switching let's say the the base Json that you are using, you can display the same information in, in multiple languages that that's how would work. Great. Thank you. Next question is to you, Gregorio. it comes from Rudi from Nimbus Publishing in Canada. And the question is, when can we expect more metadata implementation in InDesign in the near future? Well, actually, in, last year in InDesign, the, it was released the EPUB accessibility metadata, support. So when you export an EPUB three out of InDesign, if you go in the metadata export tab, you have a specific tab for accessibility, and you can fill in all the accessibility metadata that are then mentioned in the guidelines. So we can say that on the EPUB production side, we have all the metadata available in InDesign right now if you update to the latest version. And this was thanks. joint working group, of two people around the world, we have me, reach on it and involved Laura Brady and Yanis, like Rick, from Sylvia, as well working with the Adobe team to improve the overall, accessibility output of InDesign. Thank you for that, Gregorio. Next question. I think for you, Matt. But others jump in. So there was, a mention of a crosswalk for Mark records. So aligning Mark records with the accessibility metadata still to come. Any sense of a timeline for that? I don't know I that's maybe when George I don't know if you know where the work is on that. It's ongoing. But I I'm not I'm not participating in the mark aspect of it, so I can't I'm not able to answer where they are. Yeah I'm there. there is accessibility metadata network, in the infra, which is the International Organization for libraries. And we are starting working on, mappings between the different standards and the mark standards, which is the standards used in, in the library world. we just started, last year. And, that is something that requires some time. There are already fields available. There are some vocabularies for expressing information. and there are some guidelines, but there is no, at the moment, common, let's say consensus on how this should work also cause in that specific, field, the idea is to being able to express the accessibility not only of digital publications like we are, managing right now and in these guidelines, but to physical, publications and objects as well, like DVDs, audiobooks, in CDs or cassettes. So it's a little bit more complex, but something is moving. Thank you. Okay, so we've got a couple of questions now that are kind of verging towards legal questions. And what we always say in these webinars is we're not lawyers. and so any answers we give with kind of in good faith and with the best intentions, but they've come up, let's see how we handle these. So the first question, Gregory, I'm going to put to you, which is what are the required accessibility metadata. Sorry, what are the accessibility metadata requirements for the European Accessibility Act? Thank you. Thank you Richard. So, as I mentioned in my presentation, there is a requirement for having accessibility metadata for ebooks and displaying them to the end user before the borrowing or the purchasing of ebooks. And that is in the text of the law. But there are no requirements or about which metadata accessibility metadata have to be displayed. And I think this is good because this allows us to, you know, to do all this implementation. Also, course having something written in the stone of of law is then difficult to, to be updated. So let's say that some accessibility information has to be there. There are no requirements on which accessibility information. and I suggest you to refer to the information, the key information that George mentioned in, in his presentation, that should be always feasible. And they are ways of reading. And the conformance information does for sure are really important for the end user and should always be present. I think everybody is going to want to know if they can make visual adjustments, change the font and the size of the characters. People with low vision have to be able to make those changes, and people with dyslexia want to have control over the visual display. And of course, people who are blind, want to know if they're going to be able to read these publications. So non-visual reading, metadata will be important. And I think in most jurisdiction, conformance to, a standard is important. So those three areas are called out in the guidelines. Is should always be displayed. Great. We have three more questions. time for just three more. So the next is another kind of legal question. I think maybe it's not. How does the guide recommend that publishers handle the disclosure of legal exemptions or special circumstances that relate to accessibility? would someone like to take that? In the guidelines we have, a section on legal considerations is the title of that one. And we've got, a link actually in, in the body of that to, to our issue tracker, where we're trying to collect information about that. So within the EEA, a there are exemptions and exceptions. I'm not sure. what the position will be of a distributor of content if they're going to want to display that information, if there is an exemption or exception. I expect that the distributor will have a, an agreement with the publisher on what should be done with these, legal statements. It may be that it's just, it needs to be in the metadata, but it may or may not be displayed to the end user. It's a real tricky area that we've had. labored over quite a bit. And there is an example in the guidelines where, where it is shown, but it's really up to the distributor and the publisher, I think. And of course, what, what's required legally, in that jurisdiction. Right. Thank you, George Corsica. I hope that's helpful. the next question, I think, is a quick one from Ali to Matt. could you tell us the link to the, the, the the tool that you previewed, there, the one that allowed you to paste in the, metadata code and then have a preview of how it might be displayed. Yeah. Right now it's it's being hosted out of, GitHub. So it's the the link is daisy.github.io/a11y-meta-viewer. hopefully in the future will will be able to come up with a shorter daisy URL so that people will be able to to get to this fast. That that's yeah. Unfortunately the it was kind of, you know, still still in development stages right now. So we haven't gotten to that, to, to get in thank thinking about giving us the early show of that, Matt. And, that's a good prompt to mention that we always extract the links that people talk about. in the article we publish about these, webinars that are posted on the Monday. So, if Ali can wait that long, if you didn't get that link, then, it'll it'll be there in the article, and you can just, follow that through. Published on the Daisy website. And the last question we have time for that's coming back to you, George. Just, if you can be relatively quick. so, George, in your mind, in a year's time, what would success look like for the use of accessibility metadata from your perspective? Oh, I'm hoping that all distributors, and libraries will have the display of accessibility metadata available, to people. I think the end users are going to learn about this metadata pretty quickly and figure out what they need for publication. And then in the education sector, I really hope that the, designers, of course, content are going to be using the accessibility metadata to pick, publications that are accessible and are going to work for everybody. I think that there's a lot of, emphasis being placed on the selection, of course, content. And, schools need to tighten up their contracts with publishers, to make sure that that, that they're using, getting accessible content. Brilliant.

Thank you, George. And we're coming to the end of our time today. So thank you also to Gregorio, Marian, Laura and Matt for being excellent guests in the webinar. And to remind you, that in the treasure trove that is the Daisy Webinar Archive, you'll find more than 35 hours of video. You'll find articles and links to resources related to accessible publishing. And this webinar is part of our EAA Countdown Series, a 12 month program exploring all aspects of accessible publishing and reading, facilitating knowledge sharing and helping all involved to understand and prepare for the European Accessibility Act will be returning on February the 26th with 122 days to go. We'll be looking at the essentials in your toolbox. Accessible digital publishing can be a complex topic, but thankfully a portfolio of tools and services are available to guide you on your accessible publishing journey, highlighting issues and providing confidence that a material that you produce will deliver level deliver the level of accessibility intended. This webinar will guide you through the tools that everyone should be aware of to aid the successful production of accessible titles. On March the 26th, with just 94 days to go, we're diving into the topic of accessible math and science in digital publications, so representing math and scientific information is often referred to as complex content and for good reason. These can be challenging materials to make accessible in any format, and that includes within digital publications. So this webinar will highlight the latest developments in math and science content authoring and reading, making complex content more manageable and accessible to everyone. Find out more at Daisy's org forward slash webinars, where you can also sign up to the webinar announcement list to learn about new topics as we add them. If you'd like to suggested a subject, or if you'd like to share your perspective on the forthcoming European Accessibility Act, then please email us at webinars@daisy.org. Thank you so much for coming today. I hope you'll join us again next time. Goodbye.